REMARKS

I. Introduction

Pursuant to the above-noted Office Action, claims 1-12, 14-21, and 25-34 are rejected under 35 U.S.C. § 103(a) given Hamalainen et al. (U.S. Patent No. 6,289,217B1) ("Hamalainen") in view of Walton et al. (U.S. Publication No. US2003/0086371A1) ("Walton"). Claims 22-24 are rejected under 35 U.S.C. § 103(a) given Hamalainen and Walton in view of McFarland (U.S. Publication No. 2002/0006167A1) ("McFarland"). Claims 35-38 are rejected under 35 U.S.C. § 103(a) given Walton. Applicants respectfully traverse these rejections and request reconsideration.

II. §103 Rejections of Claims 1-12, 14-21, 22-24, and 25-34

A. Independent claims 1, 16, 20, 25, 28, and 30

(i) Hamalainen does not disclose, teach, or suggest trustworthy channel quality data being obtainable or the first transmission selection mode as recited in claims 1, 16, 20, 25, 28, and 30

Claims 1, 16, 20, 25, 28, and 30 have been rejected under 35 U.S.C. § 103(a) on the basis of Hamalainen, Walton, and McFarland. Applicants respectfully traverse because Hamalainen does not relate to the ***trustworthy channel quality data*** and the first ***transmission selection mode*** as required in claims 1, 16, 20, 25, 28, and 30 (***emphasis added***). Since independent claims 1, 16, 20, 25, 28, and 30 have been rejected, in whole or in part, based upon FIG. 3 of Hamalainen, Applicants believe that it would be helpful to first briefly describe and characterize the cited reference.

FIG. 3 of Hamalainen (reproduced below for the convenience of the reader) discloses an adaptation of a radio link connected to a non-real-time data transmission. See *Hamalainen*, Col. 8, lines 56-59.

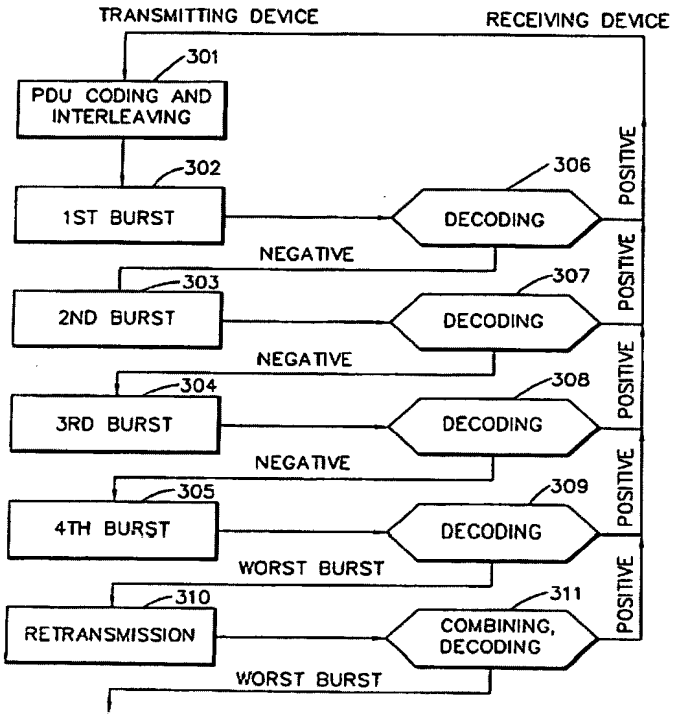

FIG. 3

As shown, for each transmission of the first through fourth data bursts 302, 303, 304, 305, the receiving device sends an acknowledgment indicating whether the data bursts 302, 303, 304, 305 have been successfully decoded (e.g., positive) or not decoded (e.g., negative). See *Id.*, Col. 9, lines 21-26. For successful decoding of the data bursts 302, 303, 304, 305, the source data are subjected to channel coding and interleaving in mode 301. See *Id.*, Col. 9, lines 14-20. If, however, the bursts are not successfully decoded 306, 307, 308, the transmitting device sends the next burst of the data sequence. See *Id.*, Col. 9, lines 26-29. If all bursts are transmitted but the decoding is still unsuccessful 306, 307, 308, 309, the transmitting device sends an Automatic Request reQuest ("ARQ") for retransmission 310, See *Id.*, Col. 9, lines 26-29, followed by the original burst and its retransmitted copy being combined in mode 311.

In contrast, claims 1, 16, 20, 25, 28, and 30 require a determination of whether a likely trustworthy channel quality data is obtainable. Specifically, Applicants respectfully submit that a determination of whether a data burst is

correctly decoded using an acknowledgement message is not the same as a determination of whether a trustworthy channel quality data is obtainable, as suggested by the Examiner. The Examiner's assertion is especially problematic when data transmission typically involves encoding and decoding of the data, which does not necessarily relate to trustworthy channel quality data. For example, on the same channel a data burst encoded with one modulation and coding rate (e.g., QPSK R=1/4) may succeed while a data burst encoded with a different modulation and coding rate (e.g., 16 QAM R=3/4) may fail. Furthermore, correct decoding is only indicative of the current (past) decoding performance. As readily apparent to one skilled in the art, trustworthiness relates to the accuracy of the data, specifically the relative likely accuracy of the data as of the time of ascertaining the data as well as the temporal currency and valid applicability of the data at a later time of use and application. See *Applicants' application*, page 6, lines 4-7.

In fact, Hamalainen fails to include any description or consideration of the trustworthiness of the channel quality data. Instead, Hamalainen relates a radio link adaptation that (1) changes the size and number of slots using an algorithm that compares the measured connection quality with given threshold values and (2) adjusts the loop that maintains the threshold values (Hamalainen, Col. 4, line 65 to Col. 5, line 9). Thus, for all these reasons, Applicants respectfully submit that Hamalainen does not disclose, teach, or suggest "determining whether likely trustworthy channel quality data is obtainable," as required in claims 1, 16, 20, 25, 28, and 30.

Moreover, Applicants respectfully submit that the sending of the next burst 303, 304, 305 and the request for retransmission 310 described in Hamalainen is not the same as the first ***transmission selection mode*** as recited in claims 1, 16, 20, 25, 28, and 30 (emphasis added). Transmission selection mode typically refers to modulation techniques and/or coding schemes of the transmitted data, such as selective or non-selective adaptive modulation and coding. In fact, the Examiner appears to acknowledge this by asserting that

the second transmission selection mode is anticipated by Hamalainen's disclosure of decreasing the coding rate, changing the coding type or increasing modulation order. See *Office Action of July 26, 2005*, page 5, paragraph 1. At the same time, the Examiner asserts that the first transmission selection mode as recited in the claims is anticipated by the sending of the next burst and/or request for retransmission as disclosed in Hamalainen.

Thus, the sending of a next burst and the request for retransmission, as presented in Hamalainen, at best, relates to a transmission mode. A particular transmission mode, however, is not the same as a transmission selection mode as recited in the claims. Applicants respectfully submit that inconsistent definitions are being applied for the first and second transmission selection mode as recited in the claims. Consequently, Applicants respectfully submit that, for all these reasons, Hamalainen does not disclose, teach, or suggest the first transmission selection modes as recited in claims 1, 16, 20, 25, 28, and 30.

(ii) Even if, arguendo, the cited references disclose the recited features of claims 1, 16, 20, 25, 28, and 30, there is no suggestion or motivation from the cited references to make the asserted combination, because Hamalainen does not relate to the level of trustworthiness of channel quality data in a multicarrier, multidimensional communications system

Since Hamalainen relates to a single carrier system, with which it appears that the Examiner agrees, See *Office Action of July 26, 2005*, page 5, paragraph 3, trustworthiness of the channel quality data is less relevant to Hamalainen. This is so because the intensity of the multipath effect (e.g., fast fading) directly affects the reception conditions, as well known in the art. See *Applicants' application*, page 2, lines 5-8. In other words, fast fading reception conditions are known to impact reception accuracy. See *Applicants' application*, page 2, line 5. However, since Hamalainen is single-carrier, only

the variations in time of fast fading are needed. Applicants' application specifically relates to multi-carrier system for which fast-fading information needs to be available in frequency as well (on one or more subcarriers). This problem, however, would not be relevant to Hamalainen given its single carrier system. Hamalainen, in fact, does not provide any discussion of these problems that relate to trustworthiness of the channel quality data relating to a multicarrier system.

The cited references, including Hamalainen, fail to recognize the problem addressed by the present invention. Thus, Applicants respectfully submit that no suggestion or motivation can be drawn from Hamalainen or the other references to make the asserted combination and hence motivation is lacking. Without motivation, there is nothing to prompt the person of average skill in the art to pick and chose disparate elements from amongst these various references and to make the combination being suggested by the Examiner. For all these reasons, Applicants respectfully submit that independent claims 1, 16, 20, 25, 28, and 30 may be passed to allowance.

B. Dependent claims 2-12, 14, 15, 17-19, 21-24, 26, 27, 29, and 31-34

Dependent claims 2-12, 14, 15, 17-19, 21-24, 26, 27, 29, and 31-34 ultimately depend respectively upon independent claims 1, 16, 20, 25, 28, and 30, which have been shown as allowable above. Moreover, they introduce additional content that, particularly when considered in context with the claims from which they depend, comprises additional incremental patentable subject matter. Applicants reserve the right to present further arguments in the future with regard to these dependent claims in the event that their corresponding independent claims are found to be unpatentable. For all these reasons, Applicants respectfully submit that dependent claims 2-12, 14, 15, 17-19, 21-24, 26, 27, 29, and 31-34 may be passed to allowance.

III. §103 Rejections of Claims 35 through 38

A. Independent claim 35

Claim 35 has been rejected under 35 U.S.C. § 103(a) on the basis of Walton. Applicants respectfully traverse because Applicants respectfully submit that no motivation or suggestion can be drawn from the cited reference to modify Walton, as asserted by the Examiner. The Examiner seemingly argues that it is obvious from paragraphs [0092] and [0094] of Walton to modify its teaching to include a message with an average channel quality indicator information across the multi-carrier channel when the channel coherence time indicates that the multicarrier channel is changing too quickly or a message with channel quality indicator information from a plurality of the carriers that comprise the multi-carrier channel when the channel coherence time does not indicate that the multicarrier channel is changing too quickly. Paragraphs [0092] or [0094] of Walton, however, provides nothing that would suggest the sending of the ***average*** channel quality indicator information across the ***multi-carrier channel*** or channel quality indicator information from ***a plurality of the carriers*** that comprise the ***multi-carrier channel*** (emphasis added) because they make no reference to a multi-carrier channel and/or any information relating to a plurality of carriers in these paragraphs.

If these asserted motivations are based on an inherency argument, Applicants respectfully request that the Examiner clarify as such. Furthermore, Applicants further respectfully request that the Examiner specifically cite and explain in more detail as to how Walton discloses or suggests these asserted motivations from the cited paragraphs of Walton. A prima facie case of obviousness requires that (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings, (2) there must be a reasonable

expectation of success, and (3) the prior art reference must teach or suggest all of the claim limitations. MPEP §§706.02(j) and 2143-2143.03. None of these requirements are met in this case. Furthermore, if the present rejection is based on any facts within the personal knowledge of the Examiner, Applicants respectfully request that the facts be set forth in the form of an affidavit. See MPEP §2144.03. These elements have not been established by the Examiner. Accordingly, for all these reasons, Applicants respectfully submit that independent claim 35 may be passed to allowance.

B. Dependent claims 36, 37, and 38

Dependent claims 36, 37, and 38 ultimately depend respectively upon independent claim 35, which has been as shown allowable above. Moreover, they introduce additional content that, particularly when considered in context with the claims from which they depend, comprises additional incremental patentable subject matter. Applicants reserve the right to present further arguments in the future with regard to these dependent claims in the event that their corresponding independent claims are found to be unpatentable. For all these reasons, Applicants respectfully submit that dependent claims 36, 37, and 38 may be passed to allowance.

IV. Conclusion

There being no other objections to or rejections of the claims, Applicants respectfully submit that claims 1-12 and 14-38 may be passed to allowance. The Examiner should contact the undersigned attorney if an interview would expedite prosecution.

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Respectfully submitted,

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